Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MB Dkt. No. 87-268
and Their Impact upon the	)	
Existing Television Broadcast	)	
Service	)	

To: Office of the Secretary

COMMENTS OF ARKANSAS EDUCATIONAL TELEVISION COMMISSION

Arkansas Educational Television Commission ("AETC"), licensee of noncommercial educational digital television station KETZ-DT, El Dorado, Arkansas (Facility ID 92872), hereby submits comments in response to the Seventh Further Notice of Proposed Rulemaking in the above-referenced proceeding.[1] For the reasons explained below and in the attached Engineering Statement of Meintel, Sgrignoli, & Wallace, AETC proposes a change in the DTV channel allotment for Station KETZ, from El Dorado, Arkansas Channel *12 to Channel *10, in order to reduce interference to KETZ and to other nearby stations.

The proposed change to DTV Channel 10 would serve the public interest by significantly reducing the interference received by KETZ-DT, as well as the interference caused to Stations KTHV-DT, Channel 12, Little Rock, Arkansas, and WJTV-DT, Channel 12, Jackson, Mississippi. As noted on pages 3 and 4 of the attached statement, channel studies demonstrate that KETZ-DT's use of Channel 10 would (a) reduce interference to the KETZ-DT service from

[1] Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Seventh Further Notice of Proposed Rulemaking*, FCC 06-150 (rel. Oct. 20, 2006) ("*FNPRM*").

19.4 % (on presently proposed Channel 12) to on 1.6 % on Channel 10; (b) reduce interference caused to KTHV-DT from 2.4 % to 0.8 %; and (c) reduce interference to WJTV-DT from 2.9 % to 0.4 %. Moreover, the study presumes that the KETZ-DT facility parameters, other than channel, would remain unchanged and thus not affect the station's coverage area or "footprint." In addition, as explained on page 5 of the attached statement, this change to the proposed Table of Allotments would satisfy the requirement in the *FNPRM* by not causing new interference to other tentative channel designations in excess of 0.1 %. Furthermore, as explained on pages 4 to 5 of the attachment, this change to the Table would also reduce the potential for new white spaces in the coverage areas of Stations KTHV and WJTV, in areas where their current analog service could be lost in post-transition DTV coverage if KETZ-DT is required to remain on Channel 12.

AETC submits that the unique circumstances surrounding KETZ's authorization history should afford the licensee with this opportunity to request an alternate channel assignment. Due to its un-paired, digital-only status, KETZ is situated similarly to stations that have been handicapped during the channel election process, such as new licensees or permittees whose channel assignments were dictated by interference considerations concerning existing stations, low-VHF designees, those unable to resolve international coordination issues, and those unable to construct full facilities due to interference considerations. AETC's 1996 new station construction permit application for KETZ was granted by the Commission in 2003 as an un-paired analog station. As a result, AETC proceeded to file for conversion of KETZ to digital-only status, and received a DTV Channel 30 permit for KETZ-DT in July, 2004, which was later modified to Channel 12 by a March 30, 2005 grant. In December, 2004, AETC had selected DTV Channel 12 for KETZ-DT's First Round Election, as it had no other options which would

not jeopardize its high-VHF channel assignment – even though AETC would prefer the post-transition use of a channel other than 12, and without its interference conflicts. As a result, KETZ was ineligible for the second and third round channel elections. *See* Engineering Statement at 2-3. Moreover, the now-preferred (and interference-reducing) DTV Channel 10 was unavailable to KETZ-DT during the channel election process, but will no longer be utilized post-transition by Station KTVE, NTSC Channel 10, El Dorado, Arkansas, which has been approved for its elected digital use of its current DTV Channel 27.

Therefore, AETC respectfully seeks a change in the proposed DTV Table of Allotments to specify KETZ-DT's use of Channel *10 at El Dorado. Per the engineering study conducted by AETC's consultants, the proposed alternative channel would provide a much sought-after decrease in post-transition interference not only to KETZ-DT, but also to Stations KTHV-DT and WJTV-DT, improving spectrum management and efficiency without causing impermissible interference to other stations.

Respectfully submitted,

ARKANSAS EDUCATIONAL
TELEVISION COMMISSION

By: Barry Persh

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January 25, 2007

Engineering Statement

Of
Dennis W. Wallace
In Support of Comments of
Arkansas Educational Telecommunications Commission
In the Matter of the
Seventh Further Notice of Proposed Rulemaking
MB Docket No. 87-268

January 25, 2007

Prepared By:

Dennis W. Wallace
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Engineering Statement In Support of Comments Submitted by the Arkansas Educational Telecommunications Commission

The Arkansas Educational Telecommunications Commission (AETC), licensee of KETZ-DT which operates on channel 12 at El Dorado, Arkansas, (Facility ID 92872) has retained the undersigned to study and assess the possibility of reducing interference to its post-transition DTV facility.

Background:

KETZ-DT is a singleton DTV-Only station authorized on channel 12 and licensed to El Dorado, AR. The original allotment for this station was an out-of-core NTSC channel. AETC was able to change this NTSC Out-Of-Core Allotment to an In-Core DTV Channel in order to meet the Commission's DTV Build-Out Schedule.

During the Pre-Election Certification Process, AETC was in the process of changing its assignment from Channel 30 to Channel 12. The operations on Channel 12 for KETZ were not optimum because of significant interference to and from other analog and digital stations. However, due to the limitation imposed by neighboring analog stations (that would presumably go away in the post-transition scenario) AETC elected to build its DTV station on Channel 12 as a "place-holder". It was AETC's intent to change its Channel 12 operations to another channel with fewer interference conflicts for the post-transition DTV operations. It was presumed at this early date that there would be an opportunity for AETC to resolve the interference conflicts and reduce the interference as part of the channel election process.

In its Form 381 Filing (Exhibit 1) the AETC informed the Commission that its DTV Channel had not yet been finalized and that it was certifying replication because it had not yet received its DTV Authorization from the Commission. It further noted that the Commission's Station Assignment and Service Information Table dated October 7, 2004, incorrectly listed KETZ as having a Paired NTSC and DTV channel. KETZ was a singleton DTV-Only facility.

KETZ-DT did receive an authorization for operations on Channel 12 on March 30, 2005 and quickly pursued construction of the facility on Channel 12. On May 26, 2006 it filed its Form 302 License application which was granted on July 26, 2006. It should be noted that this facility was constructed and licensed after the channel election process was well underway due to the delays in determining the DTV channel assignment for KETZ-DT.

It is noted that the Proposed Table in the Seventh Further Notice of Proposed Rulemaking shows the KETZ-DT facility as operating with a different ERP and with a different antenna pattern than was licensed. The Proposed Table indicates an ERP of 6KW, which is incorrect. The licensed facility ERP is 7.2 KW. Further, the antenna pattern used for the Commission's analysis is not the pattern of the licensed facility.

Channel Election Issues:

The Channel Election Process left few options for KETZ-DT on its Form 382 channel election. Since KETZ-DT was a DTV-Only singleton, it did not have an opportunity to seek another channel for its post-transition DTV channel without risking the loss of its High-VHF channel. Since it was an in-core channel, it was essentially forced under Commission rules to elect its Channel 12 in Round One of the Channel Election process. Otherwise, if KETZ-DT had elected to wait until Round 2, it could potentially have lost its High-VHF channel.

Further, the Commission's rules limited the ability of KETZ-DT to participate in the Round 3 elections since it was not on a Low-VHF channel. This preclusion has saddled KETZ-DT with operations on Channel 12 that will be significantly impacted by interference from neighboring stations choosing to also operate on channel 12, while also significantly impacting the post-transition operations of neighboring stations.

Post-Transition Interference Issues:

The Commission's NPRM shows that KETZ-DT will receive interference to 19.4% of the population in its post-transition operations on Channel 12. This significant interference renders the channel 12 facility of KETZ-DT with a large loss of coverage. Further, those neighboring stations will also be significantly impacted by interference from KETZ-DT on channel 12. (See attached Map of Post-Transition Channel 12 Service Area in Appendix A).

KTHV-DT Channel 12, Little Rock, Arkansas, and WJTV-DT Channel 12, Jackson, Mississippi, will receive significant interference to their post-transition DTV facilities from the KETZ-DT facility. In the case of KTHV-DT, the post-transition facility will receive 2.4% interference, of which almost 1.6% is from KETZ-DT (well above the 0.1% limit for new interference). In the case of WJTV-DT, the post-transition facility will receive 2.9% interference, of which 2.5% is contributed by KETZ-DT (also well above the 0.1% interference criteria for new interference).

Interference from KETZ on Channel 12 and Channel 10

Based Upon Table Parameters

Station	Table Post-Transition Interference- KETZ on Channel 12	Contribution by KETZ-DT on Channel 12 Based Upon Proposed Table	Post-Transition Interference- KETZ on Channel 10
KETZ-DT 12	19.4%	N/A	1.57%
KTHV-DT 12	2.4%	1.6%	0.82%
WJTV-DT 12	2.9%	2.5%	0.4%

The firm of Meintel, Sgrignoli, & Wallace (MSW) undertook two studies to determine if the interference to the post-transition KETZ-DT facility could be reduced, and also to

reduce the impact to neighboring stations. The studies indicate that the use of Channel 10 at the KETZ-DT location would eliminate interference or at least significantly reduce it for all three effected stations. (See attached map of Channel 10 post-transition facility and coverage in Appendix A).

The first study presumed the facility parameters would remain unchanged with the exception of the use of channel 10 instead of channel 12 (Using the Proposed Table Facilities for KETZ-DT). This would allow the Commission to view the proposal without KETZ-DT increasing its coverage area or "footprint". Essentially the proposal is for the simple substitution of channel 10 for channel 12 at the KETZ facility with all other parameters remaining unchanged (including antenna pattern and height).

The study indicated, as the table above shows, that a significant reduction in interference would result from this change. Not only would KETZ reduce the interference to its post-transition facility from 19.4% to 1.57%; but KTHV and WJTV would also receive significantly less interference with the interference loss to those facilities being reduced to 0.82% and 0.4% respectively.

A second study was undertaken using the parameters of the licensed KETZ-DT facility (as noted in the Section below). This study utilized the same methodology by substitution of channel 10 for channel 12 for the KETZ-DT facility. However, in this study the interference is based upon the parameters of the licensed facility as opposed to those assumed in the Proposed Table of Allotments in the NPRM.

Interference from KETZ on Channel 12 and Channel 10

Based Upon Licensed Parameters

Station	Licensed Facility-Transition Interference-KETZ on Channel 12	Contribution by KETZ-DT on Channel 12 Based Upon Licensed Facility	Post-Transition Interference- KETZ on Channel 10 Licensed Parameters
KETZ-DT 12	15.7%	N/A	1.57%
KTHV-DT 12	1.59%	1.57%	0.02%
WJTV-DT 12	1.27%	1.26%	0.01%

Potential for New White Spaces:

Not only is this interference reduction significant for the three stations, but it may potentially avoid the possibility of creating "new white spaces" in areas where both KTHV and WJTV had analog service but on their post-transition DTV channels these areas might be precluded from DTV reception by interference from KETZ. In the case of KTHV, the station is currently on analog channel 11 and DTV on channel 12. Some viewers who are able to receive the analog channel 11 signal may be precluded from DTV reception on channel 12. And in the case of WJTV, the station is currently on channel 12 with an analog signal and will be transitioning back to its analog channel for its post-transition DTV channel. Again in this case, viewers that may be able to receive

analog signals on channel 12 might experience reception problems with DTV from WJTV on channel 12 due to the interference from KETZ. In this way, potentially new "White Spaces" could develop if KETZ is not allowed to move its operations to channel 10.

Interference to Other Stations:

The MSW study also analyzed the potential impact to other Channel 10 and 11 Post-Transition facilities and the study indicates that the proposal would meet the Commission's 0.1% interference (no new interference to other stations) criteria as set forth in the Channel Election Process and as stated in the NPRM. The affected stations are listed in the table below.

Interference to Affected Stations with KETZ-DT on Channel 10

Channel	Call Sign	City	State	% New Interference KETZ on Channel 10
10	KLFY	Lafayette	LA	0.00
10	WMAB	Mississippi State	MS	0.02
10	NEW	Memphis	TN	0.00
11	KAQY	Columbia	LA	0.05

As can be seen from the above table, the AETC proposal to use channel 10 at KETZ-DT would meet the Commission's interference criteria with respect to other stations. And, if KETZ had been allowed to participate in Round Three of the Channel Election Process, a Tentative Channel Designation on Channel 10 could have been granted for KETZ-DT.

Furthering Public Interest and Efficient Spectrum Management:

AETC believes that the Public Interest would be served by a grant of its proposal. The Final Table of DTV Allotments can be modified to specify the use of channel 10 by KETZ-DT resulting in furthering the objectives of the Commission to provide for Free-Over-The-Air Universal Television Service to the Citizens of Arkansas and to reduce the impact to viewers of neighboring stations. The studies conducted on behalf on AETC indicate that no other stations would be negatively impacted by a grant of this proposal.

Further, the Commission would benefit by better use and management of its valuable spectrum resources. As the study show, better and more efficient use of the spectrum would result from the Commission adopting AETC's proposal. Interference would be reduced and operations for neighboring DTV stations would improve. This would result in the Commissions furthering its goals of efficient management of its spectrum resources.

Facilities Used In The Study:

KETZ-DT Licensed Facility Parameters Used for the Study

Antenna Structure Registration Number	1039950
Channel	10
ERP	7.2 KW
Antenna Model	Jampro JHD HV2 2/4 (8) R
Antenna Pattern	Same as current channel 12 Facility[1]
RCAMSL	569 Meters
North Latitude	33-04-41
West Longitude	92-13-41

In conducting its study for AETC, the above facility parameters were utilized. For the case at hand, KETZ would not be increasing its service area or "foot-print" beyond its existing service area. The study was conducted using the OET-69 Methodology using Techware software.

Conclusions:

Throughout the DTV-Transition process, AETC has met the requirements of the transition while serving the citizens of Arkansas with valuable educational programming. The ability of KETZ-DT to move its operations from channel 12 to channel 10 will significantly reduce interference to other stations while minimizing interference to the viewers of KETZ-DT. AETC believes that this will better utilize the resources of the AETC and the State of Arkansas, better manage the valuable spectrum resources of the Commission, and at the same time, improve DTV reception for viewers of other neighboring post-transition DTV stations.

The Commission's Channel Election Process did not afford AETC and KETZ-DT the opportunity to seek a substitute channel for its channel 12 facility without risking the loss of its High-VHF channel due to the constraints of the eligibility requirements in each election round. If KETZ-DT had been able to participate in Round 3 of the Election Process its use of Channel 10 could have been granted, and a TCD on Channel 10 would have met the Commission's technical requirements. As a result of KETZ-DT not being able to participate in Round 3 of the Election process, the post-transition coverage of KETZ-DT is severely impacted resulting in interference to almost 20% of its population (based upon the Table Parameters).

[1] See Appendix B to this Statement for Jampro Antenna Pattern (JHD HV2 2/4 (8) R)

The Table of Allotments in the 7th Further Notice of Proposed Rulemaking should be modified to specify the use of Channel 10 at El Dorado by KETZ-DT as requested by the AETC. As shown here, the use of channel 10 by KETZ-DT would serve the public interest by reducing interference to the citizens of Arkansas as well as reducing interference to stations KTHV-DT Little Rock, AR. and WJTV-DT Jackson, MS. The AETC proposal meets the Commissions interference criteria in all respects and does not increase the service area of the currently authorized KETZ-DT Facility. Thus, an adoption of the AETC proposal is warranted.

Certification:

This statement with associated exhibits was prepared by me or under my direction. All assertions in this statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are based upon information from sources known reliable and believed to be true.

Submitted this 25th Day of January, 2007

_____

By: Dennis W. Wallace

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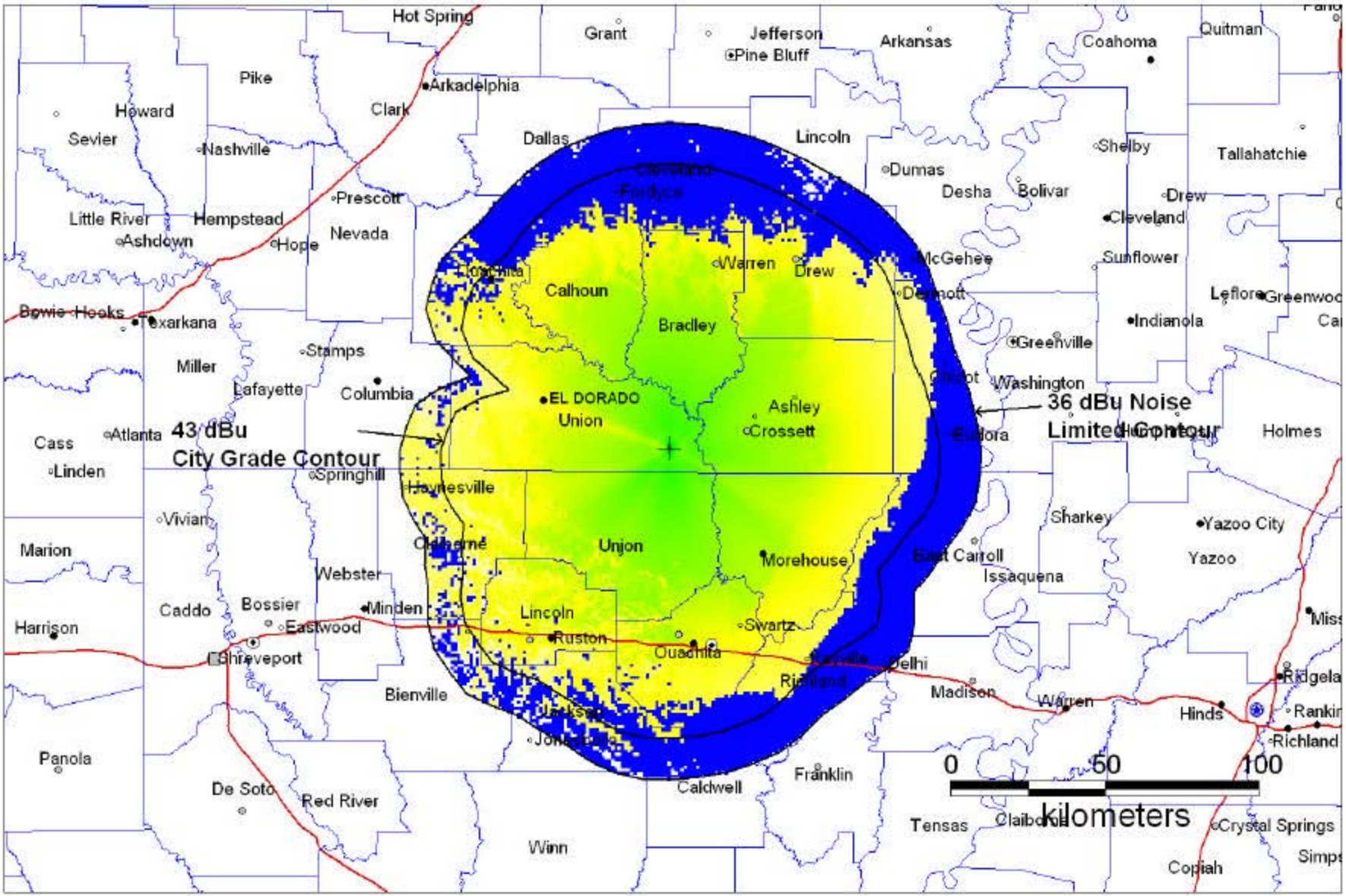
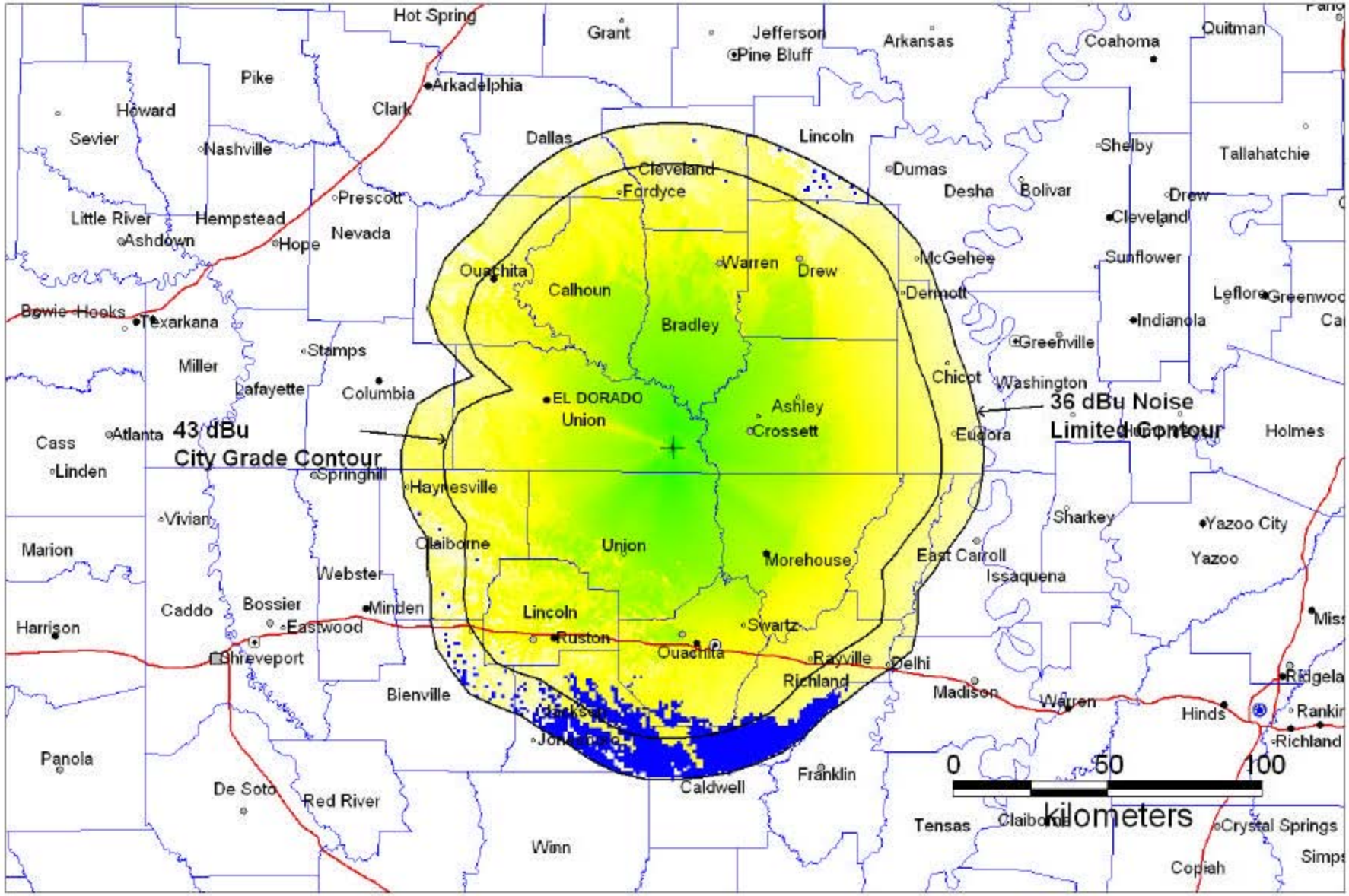
Appendix A

Coverage Maps of Post-Transition KETZ-DT

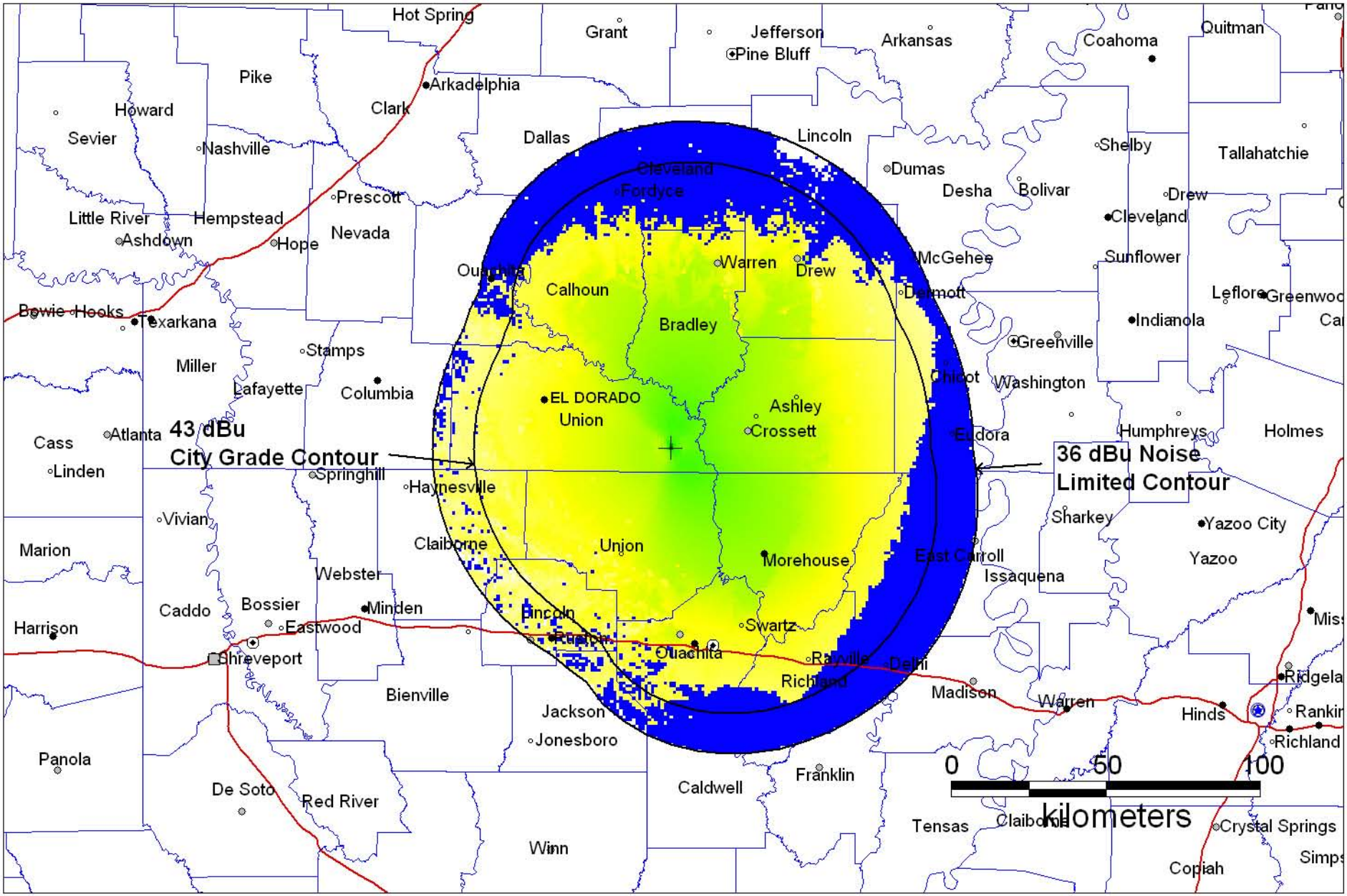
Channel 12 and Channel 10



KETZ El Dorado, AR - DTV on Channel 12
Predicted Post Transition Service
Current Height and Antenna Pattern at 7.2 kW
Blue indicates predicted interference
Dark green indicates high predicted field strength fading to yellow
and then to white at the noise limited service threshold



KETZ El Dorado, AR - DTV on Channel 10
Predicted Post Transition Service
Current Height and Antenna Pattern at 7.2 kW
Blue indicates predicted interference
Dark green indicates high predicted field strength fading to yellow
and then to white at the noise limited service threshold

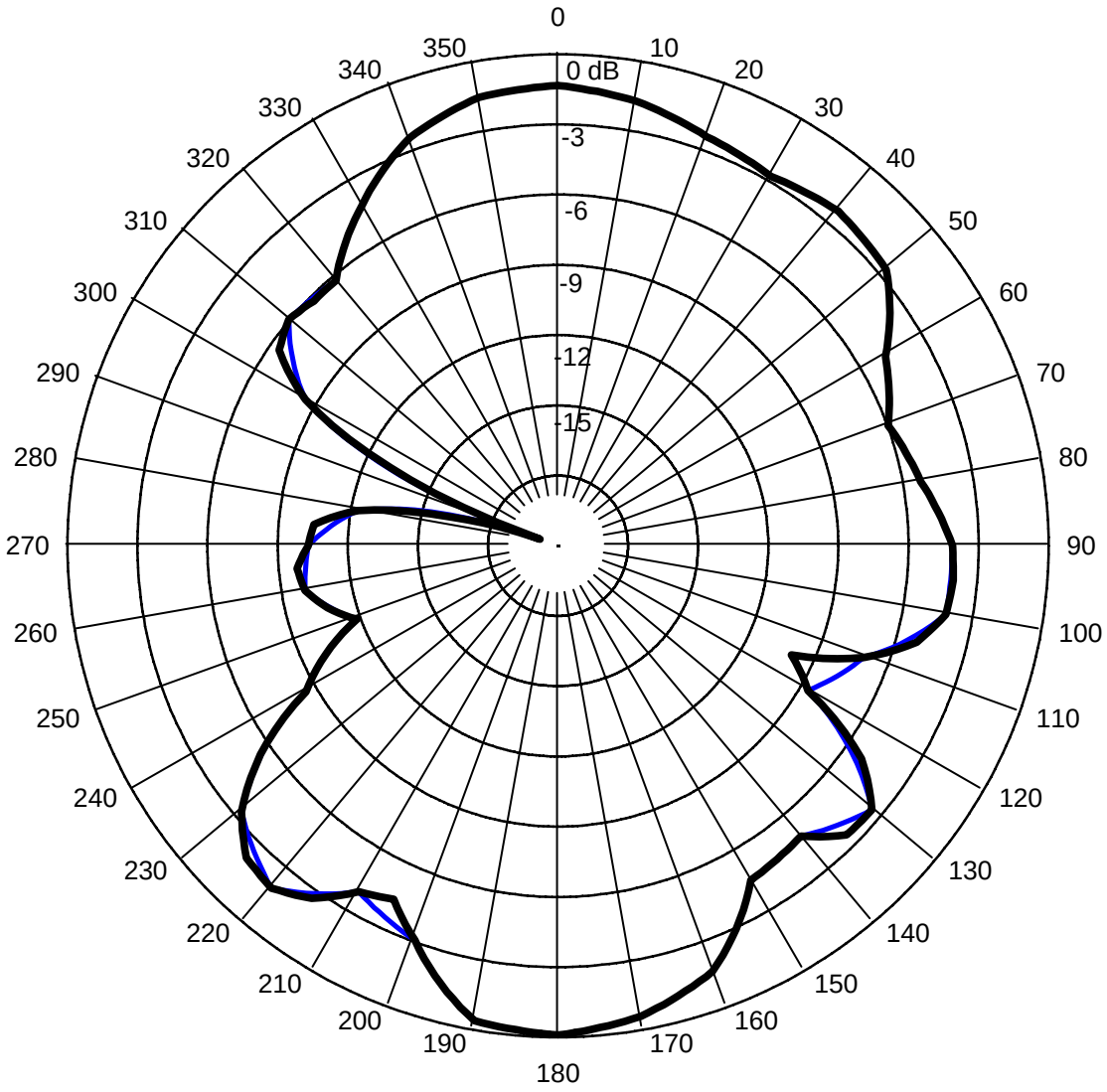


KETZ El Dorado, AR - DTV on Channel 12
Predicted Post Transition Service
Current Authorized Facility
Blue indicates predicted interference
Dark green indicates high predicted field strength fading to yellow
and then to white at the noise limited service threshold

Appendix B

KETZ-DT Jampro Antenna Data

Azimuth Pattern



AZIMUTH PATTERN LIMITS

Customer: KETZ TV El Dorado, AR October 3, 2005
Frequency: 204-210 MHz / CH 12 dB Scale Used Model: JHD-HV2- 2/4 (8) R
Gain approx.: 5.807x/ 7.640 dB Black=Desired, Blue=Jampro Anticipated

6340 Sky Creek Drive, Sacramento, CA 95829 web: www.Jampro.com
TEL: 01+916-383-1177 FAX: 01+916-383-1182

TABULATION

AZIMUTH	FIELD	AZIMUTH	FIELD
0	0.856	180	0.988
10	0.82	190	0.955
20	0.758	200	0.702
30	0.725	210	0.635
40	0.763	220	0.802
50	0.736	230	0.682
60	0.574	240	0.374
70	0.503	250	0.256
80	0.547	260	0.316
90	0.622	270	0.305
100	0.62	280	0.242
110	0.443	290	0.098
120	0.369	300	0.375
130	0.671	310	0.503
140	0.574	320	0.489
150	0.595	330	0.615
160	0.826	340	0.754
170	0.934	350	0.836

AZIMUTH PATTERN LIMITS

Customer: KETZ TV El Dorado, AR October 3, 2005
Frequency: 204-210 MHz / CH 12 Model: JHD-HV2- 2/4 (8) R
Gain approx.: 5.807x/ 7.640 dB

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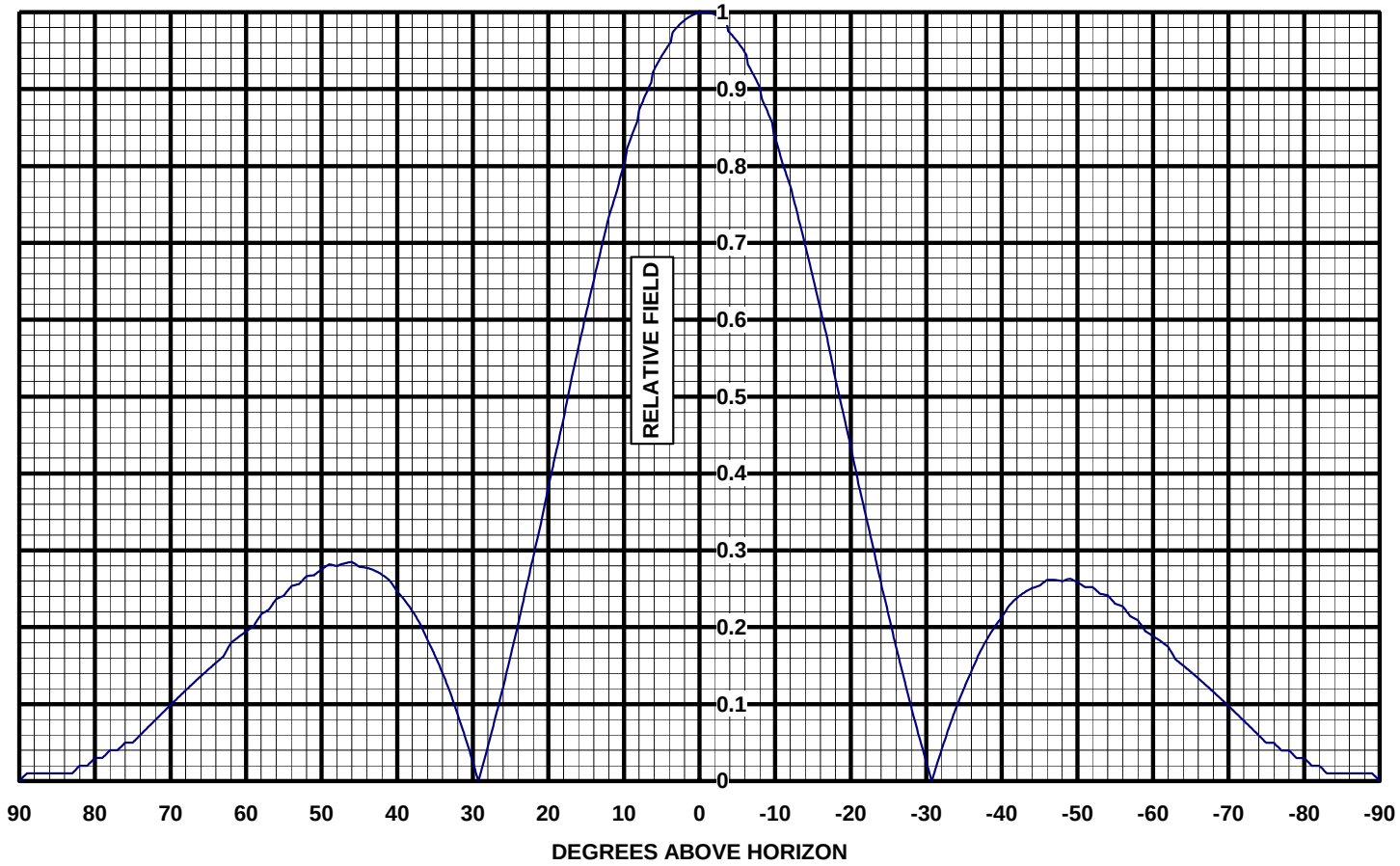
TEL: 01+916-383-1177 FAX: 01+916-383-1182

JAMPRO
ANTENNAS AND RF SYSTEMS, INC.

COMPUTED ELEVATION PATTERN



ELEVATION PATTERN

Customer: KETZ TV **El Dorado, AR** **March 17, 2005**

Frequency: 204-210 MHz / CH 12 **Model: JHD-HV2-2/4 (8) R**

50 Years of crafting fine TV and FM Antennas.

6340 Sky Creek Road, Sacramento, CA 95828
TEL: 916-383-1177 FAX: 916-383-1182 WEB www.Jampro.com

ELEVATION PATTERN TABULATION

RELATIVE FIELD VS ELEVATION ANGLE

ELEVATION ANGLE	RELATIVE FIELD	ELEVATION ANGLE	RELATIVE FIELD	ELEVATION ANGLE	RELATIVE FIELD
10	0.803	-26	0.175	-61	0.182
9	0.839	-27	0.136	-62	0.175
8	0.873	-28	0.097	-63	0.158
7	0.896	-29	0.060	-64	0.150
6	0.925	-30	0.025	-65	0.142
5	0.943	-31	0.008	-66	0.133
4	0.958	-32	0.039	-67	0.125
3	0.980	-33	0.069	-68	0.116
2	0.990	-34	0.096	-69	0.107
1	0.996	-35	0.121	-70	0.097
0	0.999	-36	0.143	-71	0.088
-1	1.000	-37	0.166	-72	0.079
-2	0.997	-38	0.184	-73	0.069
-3	0.992	-39	0.199	-74	0.059
-4	0.973	-40	0.213	-75	0.049
-5	0.962	-41	0.229	-76	0.050
-6	0.948	-42	0.238	-77	0.040
-7	0.921	-43	0.245	-78	0.040
-8	0.902	-44	0.251	-79	0.030
-9	0.871	-45	0.254	-80	0.030
-10	0.838	-46	0.262	-81	0.020
-11	0.803	-47	0.262	-82	0.020
-12	0.774	-48	0.260	-83	0.010
-13	0.736	-49	0.263	-84	0.010
-14	0.696	-50	0.258	-85	0.010
-15	0.655	-51	0.252	-86	0.010
-16	0.614	-52	0.252	-87	0.010
-17	0.571	-53	0.243	-88	0.010
-18	0.522	-54	0.242	-89	0.010
-19	0.479	-55	0.231	-90	0.000
-20	0.436	-56	0.227		
-21	0.388	-57	0.214		
-22	0.345	-58	0.209		
-23	0.303	-59	0.195		
-24	0.258	-60	0.189		
-25	0.217				

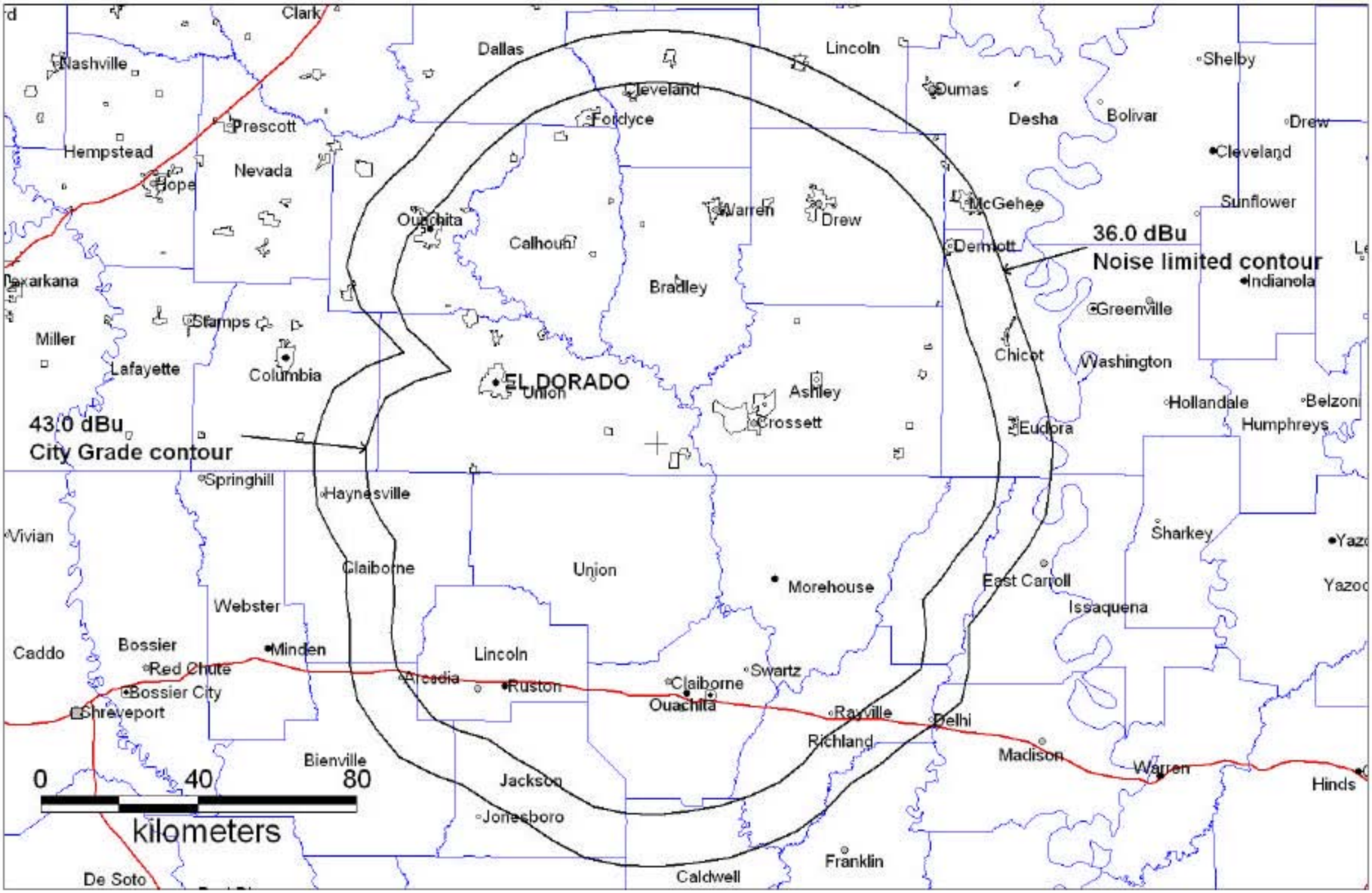
ELEVATION PATTERN

Customer: KETZ TV **Eugene, OR** **March 17, 2005**

Frequency: 204-210 MHz / CH 12 **Model: JHD-HV2-2/4 (8) R**

50 Years of crafting fine TV and FM Antennas.

6340 Sky Creek Road, Sacramento, CA 95828
TEL: 916-383-1177 FAX: 916-383-1182 WEB www.Jampro.com



KETZ El Dorado, AR - DTV Channel 12 - ERP 7.2 kW
City Grade Coverage Verification